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ABSTRACT

To examine the consequences of responsiveness in dyadic interaction, explore the effects of irrelevant response on listener processing and retention of content, and determine the impact of irrelevant responses on listener perception of speaker attributes, 108 college students were asked to read a debate between two fictitious political candidates on the MX missile. While the two debators' answers remained the same, the questions were manipulated so that for half the subjects, candidate A's answers were responsive; for the other half, candidate B's were responsive. In two replications of the test emphasizing either recall or recognition of debate content, subjects answered questions on their perceptions of the candidates' understanding of the issue, their personal preference between the two debators, and the debators' apparent honesty and competence. As expected, response relevance was shown to facilitate processing and retention of response content. In addition, the unresponsive speaker was perceived to have a poorer understanding of the questions asked, to be less knowledgeable about the issues, and to be both less motivated and less competent to discuss the issues raised. Finally, the unresponsive candidate was perceived as less attractive than the responsive candidate. (Debate question and answer sets and questionnaire results are appended.) (MM)

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Perceptions of Unresponsive Others: Attributions, Attraction, Understandability, and Memory of Their Utterances.

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Abstract

Analyses of the rules governing conversation have frequently pointed to the existence of a rule dictating that responses to others' communications should be relevant. Unfortunately, there have been few systematic theoretical analyses of the consequences of violations of the response relevance rule. The present research was designed to extend our previous analyses of the consequences of responsiveness in dyadic interaction (Davis, 1982; Davis & Perkowitz, 1979) to examine in detail the effects of irrelevant response on processing and retention of response content, and attributions concerning the speaker. It was argued that irrelevant responses will be processed and retained more poorly, because the preceding utterance will provide a less adequate context for their interpretation. In addition, it was argued that unresponsiveness will generally be attributed to the lack of one or more of four factors previously suggested to facilitate responsiveness (Davis, 1982): attention to the other, understanding of the preceding communication, adequate response repertoire, or motivation to be responsive - along with situational (e.g., distraction) or dispositional (e.g., incompetence) reasons for their absence. These processes were examined in the context of a political debate, in which the relevance of candidates' answers to the questions was varied. As expected, response relevance was shown to facilitate processing (as indexed by ratings of clarity and organization) and retention (both recall and recognition memory) of response content. Further, the unresponsive speaker was perceived to have less clearly understood the questions asked, to possess less knowledge of the facts and understanding of the issues concerning the questions raised, and to be less motivated to discuss the issues raised. Moreover, those attributions were accompanied by attributions of dispositional incompetence. Finally, the unresponsive candidate was perceived as less attractive than the responsive candidate.

The process of social interaction is guided by a set of expectations (or scripts, rules, norms, conventions, etc.) concerning the way in which interaction should proceed. These expectations not only direct the course of interaction, but also provide the basis for implicit theories of interaction that will affect our understanding of its meaning: understanding not only of the meaning of specific utterances or behaviors, but also of the motives and intentions of the participants and of the broader implications for the relationship between participants.

Among the most frequently mentioned rules of conversation is that of "response relevance." Many of the recent "rules-based" analyses of conversation have pointed to the existence of social norms or rules dictating that responses to others' communications should be relevant (e.g., Argyle, 1967; Donaldson, 1979; Grice, 1975; Sacks, Schegloff & Jefferson, 1978; Schegloff, 1972; Searle 1969; Weiner & Goodenough, 1977; Wiemann, 1977). Piaget (1959) has gone so far as to stipulate that one cannot characterize collective verbal behavior as conversation until at least "three consecutive remarks about the same subject are made by a minimum of two interlocutors" (P. 52). Even the various analyses of topic changing (e.g., Keenan & Schieffelin, 1976; Nofsinger & Boyd, Note 1; Planalp & Tracy, 1980; Schank, 1977; Sullivan, 1970; Vuchinich, 1977), and of the sequencing of stories in conversation (e.g., Jefferson, 1978; Ryave, 1978) have presumed that those topic changes or stories that are made most clearly relevant to their predecessors will be considered most acceptable or skillful. Although it is clear that there is widespread agreement concerning the existence of a norm regarding response relevance, there has been little systematic theoretical and empirical exploration of the consequences of its violation. The present research will extend our own previous analyses of the role of "responsiveness" in dyadic interaction (Davis, 1982; Davis & Perkowitz, 1979) to consider in greater detail the consequences of irrelevant response. We will begin with a brief review of the concept of responsiveness and our previous analyses of its consequences,

and then proceed to consider in depth the information processing and attributional consequences of irrelevant response.

The Nature and Consequences of Responsiveness

Responsiveness is defined in terms of three sequential response contingencies in dyadic interaction: (1) the probability with which each person responds to the communicative behaviors of the other (2) response relevance (i.e., the degree to which each response is perceived by the listener to directly address the content of his/her precedings communication, and (3) appropriateness of response elaboration. The elaboration of a response is appropriate (responsive) to the extent that it matches the demand for elaboration that is implicit in the preceding communication of the other (that is, the degree of elaboration that the speaker intended to elicit). The nature of demands for elaboration must be infered from such cues as the context in which the communication occurs, the specific content of the communication, nonverbal cues such as voice inflection, and so on.

Our previous analyses of the antecedents and consequences of responsiveness (Davis, 1982; Davis & Perkowitz, 1979) have provided the first systematic exploration of the consequences of violation of the norm (or rule) of response relevance. More generally, they have provided the first systematic theoretical attempt to explore an interaction process variable as both an independent and dependent variable; and to examine the relationship of external variables (such as personality or situational factors) to its impact as an independent variable.

As an independent variable, responsiveness has been shown to have a variety of consequences for both the process and outcomes of interaction. For example, responsiveness will affect such process variables as maintenance of interaction, maintenance of focus on particular topics, the degree to which the interaction is predictable and controllable, and communication efficiency and accuracy; and such outcome variables as the degree to which interaction goals are accomplished,

interpersonal attributions, and attraction. As a dependent variable, responsiveness is affected by a variety of personality, role, and situational factors: such as self-consciousness, status, distraction, acute motivational states, and many more. Evidence for these and other antecedents and consequences of responsiveness is presented in detail elsewhere (Davis, 1982; Note 2; Davis & Perkowitz, 1979), and will not be repeated here.

The present research was designed to further address two of the suggested consequences of responsiveness: (1) differences in processing and retention of responsive and unresponsive content, and (2) the nature of interpersonal attributions concerning responsive and unresponsive others. Although all three aspects of responsiveness will influence processing and attributions (see Davis, 1982), only response relevance will be considered in the present research.

Processing and Retention of Unresponsive Content

We have noted elsewhere (Davis, 1982) that norms or expectations regarding response relevance not only lead persons to respond to others' communications with relevant content, but also lead them to expect relevant response to their own communications from others. To the extent that expectations of relevance guide the processing of others' responses to our own communications, it follows that response relevance will have specific and predictable effects on the processing and retention of response content. Evidence in support of several such effects is presented below.

Effects on Interpretation

A number of authors have pointed out the way in which expectations of relevance will affect the interpretation of other's responses. For example, both Sacks, Schegloff and Jefferson (1978) and Weiner and Goodenough (1977) have argued that unless very specific conversational "moves" are enacted that will serve to satisfactorily close one topic and begin another, the current utterance will be understood to address the preceding topic. The appropriate conversational

moves include at least minimal acknowledgement of the previous topic (i.e., a relevant response) before the new topic is introduced.

The importance of preceding utterances for understanding in conversation was also noted by Clark and Carlson (1981). The authors discussed the importance of "common ground" (shared knowledge) between the speaker and listener as intrinsic context for comprehension of conversation, arguing that "the listener takes as common ground between him and the speaker all of their conversation up to and including the utterance currently being interpreted" (p. 323). The listener's own immediately preceding remark will be most salient, and thus would be expected to provide the immediate context for interpretation of the speaker's current response.

Finally, Grice (1975) has suggested that the listener will tend to make inferences that will establish the relevance of a response to a preceding remark, even if the literal content of the response appears to be irrelevant. This process is illustrated in the operation of Grice's (1975) classic "maxims" for conversation. Grice argued that conversations are guided by a cooperative principle based on the assumption that the participants share a common purpose and direction. He suggested four maxims that participants must follow if the cooperative nature of conversation is to be realized: including a maxim of relevance (make your utterance relevant to the topic). If a speaker flouts a maxim, and the listener assumes that he is still abiding by the cooperative principle, then a conversational "implicature" will result. That is, the meaning of the utterance is altered so that it may be interpreted in a way that does not violate the maxim.

When the relevance maxim is violated the conversational implicature will consist of an inference concerning the meaning of the utterance that will establish its relevance to the preceding remark. The following example from Grice (1975) illustrates an instance of such an implicature.

At a genteel tea party, A says, "Mrs. X is an old bag."

There is a moment of appalled silence and then B says,
"The weather has been quite delightful this summer, hasn't it?" (p.54)

Although the literal content of B's remark is blatantly irrelevant to A's preceding remark, Grice points out that it will be perceived as directly addressing A's remark. That is, a conversational implicature will occur such that the listeners infer that B's remark was intended to indicate that A's remark should not be discussed, or that A had committed a social gaffe.

Although in the above example the relevance of the speaker's response could be easily inferred, in many instances the connection may be more difficult to identify. If the connection cannot be understood, the listener will often either attempt to discover the connection, by asking the speaker to identify it (e.g., "What does that have to do with what I just said?"), or simply point out its absence (e.g., "You didn't answer my question." or "That has nothing to do with what I just said."). Such responses are commonplace, and reflect the strength of expectations of relevance.

When others' responses actually are relevant to one's own preceding communications, the strong tendency to expect and perceive that their responses will be relevant will tend to facilitate processing and understanding of their utterances. However, when responses are indeed irrelevant, expectations of relevance may have two potentially deliterious effects. First, a response that is not meant to address the preceding communication may be misunderstood to do so. In other words, one may perceive a relationship between the two communications even if none was intended. Weiner and Goodenough (1977) address this possibility, arguing that such misinterpretations are particularly likely to occur when the speaker has failed to enact appropriate conversational moves for closing one topic and beginning another. Second, several lines of research suggest that an irrelevant response may be processed less easily, and remembered more poorly, than a relevant response. It is with these latter possibilities that the present

research is concerned.

Processing Efficiency and Retention

It is clear from the above discussion that the immediately preceding utterance in a conversation will contribute substantially to the "context" (Bransford, 1979), "foregrounding" (Chafe, 1972), "antecedents" (Clark & Haviland, 1977), or "schemas" (Kintsch & van Dijk, 1978) with respect to which a particular utterance will be processed. A substantial amount of theory and research in the areas of linguistics, sociolinguistics, communications, cognitive psychology, and social psychology has demonstrated that the existence of adequate antecedents, contexts, etc., facilitates processing efficiency, understanding, and retention of verbal material (e.g., Bransford, 1979; Bransford & Johnson, 1972; 1973; Chafe, 1972; Clark & Haviland, 1977; Keenan & Schieffelin, 1976; Planalp & Tracy, 1980; Rommetveit, 1974; 1979; Rommetveit, Cook, Havelka, Henry, Herkner, Pecheux, & Peeters, 1971). In addition, research in the area of social cognition has demonstrated that content that is relevant to currently activated "schemas" is processed more efficiently and retained better than schema-irrelevant content (see reviews by Taylor & Crocker, 1981; Wyer & Srull, 1980).

Most pertinent to the present concerns, Bransford & Johnson (1973) demonstrated that under certain conditions contextual cues can hinder comprehension and memory. The authors presented subjects with either relevant, irrelevant, or no contexts for prose passages. As expected, the relevant context produced greater comprehension and memory than no context. However, the presentation of an irrelevant context produced significantly less comprehension and memory than the no context condition. The authors noted that in a no context condition, individuals may sometimes be able to construct a context in order to make a sentence or passage comprehensible. An irrelevant context, on the other hand, will tend to misdirect the subject so that the discovery of a useful context is hindered.

Applying the Bransford and Johnson (1973) results to conversation, it follows that a preceding remark will provide a relevant context for interpretation of responsive utterances, but an irrelevant context for interpretation of unresponsive utterances. To the extent that the remark will thus provide a more adequate, or relevant, context for processing of responsive than for unresponsive utterances; and to the extent that responsive utterances from others are more relevant to the schemas activated by the preceding remark than are unresponsive utterances, unresponsive content should be processed less efficiently and accurately, and thus remembered more poorly, than responsive content.

A similar conclusion is suggested by literature on comprehension of prose or sentence sequences. The above literature concerning the effects of contextual cues and schematic processing dealt with the effects of a single contextual cue, or the activation of a particular concept, on processing and retention. Studies of prose comprehension have dealt, instead, with what may be thought of as sequential contextual cues: that is, the degree to which the separate components, or sentences, in a prose passage are related to one another. This literature has clearly demonstrated that processing efficiency, comprehension, and retention are superior for text and sentence sequences in which the ideas or sentences are clearly related to one another.

For example, Kintsch & van Dijk (1978) argue that when a reader must perform "resource-consuming" operations in order to establish the relationship between the components of a text, processing efficiency and/or comprehension will be impaired. Further, if the relationship cannot be understood, the representation of the material in memory will not be coherent, and retrieval will thus be poor. Resource-consuming operations include long term memory search (to locate proper referents - such as previous topics or information not in the immediate text), and inferences required to establish the relationship between components of the text. Such operations would also be expected to occur in attempts to understand

unresponsive conversation.

Several studies have demonstrated that processing efficiency (as indexed by reading time), and retention, are affected by the referential coherence of reading material. That is, reading time has been shown to be shorter for causally related sentences than for ones that were not causally related (Haberlandt & Bingham, 1978), and shorter the fewer inferences required to establish the referential connections between sentences (Bower, Black & Turner, 1979; Haviland & Clark, 1974); and memory has been shown to be superior for text statements connected by inferential, causal, or referential relations (Black, 1981; Black & Bern, in press; DeVilliers, 1974; Knitsch & van Dijk, 1978, van Dijk, 1980). Further, comprehension is greater for sentences in which a single clear referential antecedent is available (e.g., Clark & Haviland, 1977). This literature clearly suggests that processing and retention will be superior for sequential utterances in conversation that are clearly related to one another (i.e., responsive). The present research tested these conclusions by assessing (1) subjects' ratings of the clarity and logic of responsive and unresponsive content, and (2) subjects' recall and recognition memory for responsive versus unresponsive content.

Attributional Consequences of Unresponsiveness

When confronted with an apparently irrelevant response, the listener will often first assume that it is actually relevant and attempt to infer or ascertain the way in which it is relevant (as illustrated earlier). However, if no relationship can be discovered s(he) will then assume that the response is actually irrelevant, and infer a motive or reason for its irrelevance; either by direct questioning (e.g., "why didn't you answer my question?" "Why are you changing the subject?") or by inference. Although the nature of these inferences will vary with the topic of conversation, the relationship between participants, and many other contextual features, several categories of likely inferences may be

identified.

Four general categories of inferences are suggested by our previous analyses of the determinants of responsiveness (Davis, 1982; Davis & Perkowitz, 1979). Four general factors were identified that are expected to affect responsiveness: (1) attention to one's partner (so that communications demanding response will be noticed and processed accurately), (2) accurate understanding of the other's communication (so that the appropriate meaning will be addressed), (3) possession of response repertoires that are adequate for formulation of relevant and appropriately elaborate responses, and (4) motivation to be responsive. It follows, then, that when a speaker responds to a preceding remark with irrelevant content, one may infer that one or more of the variables expected to facilitate responsiveness were absent.

Inferred absence of the above four variables will generally be associated with a variety of additional attributions reflecting possible reasons for their absence. Inferred absence of the first three variables will often be associated with attributions concerning either involvement in the interaction or knowledgeability and competence. For example, if one concluded that the speaker did not pay attention to the preceding remark, one might also assume that the speaker was not interested in the conversation, didn't like the person making the remark, was distracted or inebriated, and much more. Inferences that the speaker did not understand the preceding remark or did not possess an adequate response repertoire would generally be associated with further unfavorable attributions concerning the speaker's level of intelligence, competence, knowledgeability and so forth. The listener might also infer that the speaker did not understand the relationship between his response and the preceding remark (i.e., did not realize the response was irrelevant); again, an attribution that would not reflect favorably on the speaker's level of competence.

Inferred absence of the motivation to be responsive may lead to a veritable

plethora of additional attributions. We have documented elsewhere (Davis, 1982) that responsiveness to another will have a variety of effects that may or may not be desirable; including (1) maintenance of interaction, (2) maintenance of focus on a particular topic, (3) increased acquaintance and felt intimacy with the other, (4) appearing to like or be interested in the other, (5) increasing the other's attraction to oneself, and (6) allowing one's partner greater control over the interaction. Thus, unresponsiveness may lead to the assumption that one or more of the above effects were not consistent with the speaker's goals for the interaction. That is, one might infer that the speaker wanted to terminate interaction, did not wish to discuss the topic in question, did not like the other person and/or was not interested in making the other like him, did not wish to allow his partner to direct the conversation, etc. It might also be inferred that responsiveness was otherwise inconsistent with the speaker's interaction goals. For example, the speaker may want to impress the listener, but feel that a response relevant to the topic initiated by the other could only make him look bad. Any or all of the above attributions may follow from unresponsiveness. The particular attributions chosen will depend on a number of characteristics of the situation, the interaction partners, and so forth.

Situational Effects on Attributions

Our analysis of the determinants of responsiveness suggests that the perceiver will infer that either attention, understanding of the preceding communication, an adequate response repertoire, or motivation to be responsive was lacking. However, the interaction context may be expected to affect these attributions in at least three ways.

First, the degree to which each of the above four categories of attributions is affected by responsiveness will vary widely from situation to situation. For example, when in a distracting situation, unresponsiveness may be attributed to lack of attention; whereas in a discussion of delicate matters, attributions

concerning motivation may predominate.

Second, when the perceiver infers that one of the four factors affecting responsiveness was absent, (s)he will also tend to infer a reason for its absence. For example, lack of attention may be attributed to distraction, lack of interest in the conversation, inebriation, lack of attraction to the other person, etc. Similarly, lack of understanding may be attributed to failure to attend, incompetence, ambiguity in the preceding communication, etc.; or lack of motivation to desire to avoid the topic, dislike for the other person, desire to maintain control of the interaction, etc. These specific attributions will be affected strongly by the interaction context.

Third, attributions concerning the dispositional characteristics of the speaker will often accompany those concerning the immediate causes of unresponsiveness. In many situations unresponsiveness will affect primarily attributions of competence. In other situations, unresponsivensss may affect perceptions of such characteristics as "flighty", "rude", "inconsiderate", "out of touch", "insensitive", etc.

The above discussion clearly demonstrates that there will be no particular set of attributions that will follow from every instance of unresponsiveness. We wish to argue only that attributions concerning responsiveness will typically include the absence of one or more of the four general factors noted above, and one or more specific reasons for their absence. In many cases however, it is possible to identify the most likely attributional consequences of unresponsiveness. The present research was designed to illustrate the operation of these attributional processes in the context of a political debate - a situation in which most of us have often noted considerable unresponsiveness.

Overview

Our choice of the political debate as a context for the initial illustration of the hypothesized processing and attributional consequences of unresponsiveness

followed from several considerations. First, in order to provide the most precise and controlled test of the hypotheses, it was desirable to keep the content of the target speaker's utterances constant, while varying only their relevance to the preceding communication. Without this control, any differences in the dependent variables could be explained in terms of the content of the responses, rather than their relevance.

Since the difficulties of constructing an unstructured conversation that would meet these requirements were enormous, we found it desirable to use a relatively structured situation involving question-answer sequences. Under other circumstances, we would probably have chosen to use an interview format to test our hypotheses. However, this research was initiated shortly after the 1980 elections, while our memories of the presidential debates, and others between local candidates, were still fresh. Thus, instead, we chose the debate format.

Second, the political debate is a situation where the most probable attributional consequences of unresponsiveness are readily identifiable, as illustrated below.

We have suggested that attributions will consist first of the lack of attention, understanding, response repertoire and/or motivation; second, of possible reasons for the absence of these variables; and finally, dispositional attributions that follow from the first two. In the debating situation, the speaker is required to pay attention to the interviewer. Thus, the first level of attributions will be likely to include lack of understanding (of the questions asked), inadequate response repertoire (knowledge of the facts and issues pertinent to the questions asked), and/or lack of motivation to answer relevantly.

Further, additional attributions that are likely to follow from those noted above may be identified. For example, attributions concerning lack of understanding or of inadequate response repertoire will often be associated with unfavorable perceptions of the speakers knowledgeability and competence.

Attributions concerning motivation, on the other hand, will likely include the inference that the debator did not wish to discuss the topic in question, and possible reasons for his wish to avoid the topic.

For the political candidate, likely reasons for avoidance of particular topics include such things as lack of interest in the topic, motivation to hide something, and self-presentational goals that might discourage relevant response. Finally, attributions concerning motivation to hide something or self-presentational goals that discourage relevant responses may reflect negatively on honesty and sincerity. The present research examined the impact of unresponsiveness on each of the attributions suggested above.

Although there will surely be exceptions (e.g., the speaker changes the subject to avoid violating a confidence or national security), the above illustrations suggest that under many circumstances, the attributions that follow unresponsiveness will reflect negatively on the speaker. Thus, it follows that unresponsive speakers will be less attractive than responsive speakers. This prediction has been supported in several other contexts (Davis & Perkowitz 1979; Berg & Archer, Note 3), and is expected to be replicated in the present research.

Method

Design

Subjects read a debate, constructed for the present study, concerning the then controversial MX missile system. The debate was described as having occurred during the 1980 campaigns (between two Nevada politicians), and consisted of answers from each of two candidates to each of four questions.

In order to keep the content of responses constant, as described above, responsiveness was manipulated by varying the questions, rather than the candidates' answers. The answers of each candidate remained the same in all conditions. However, two sets of four questions were employed - such that for half of the subjects (those seeing set 1), candidate A's answers were responsive, and

B's unresponsive; and for the other half (those seeing set 2), candidate A's answers were unresponsive, and B's responsive.

Insert table 1 about here

Table 1 illustrates the way in which questions and answers were constructed. It contains the responses of both debators (who were called Xavier and Zillstein), and the questions from sets 1 and 2 with which these responses were paired. Pairs of questions were selected to be somewhat related. Thus, answers could be constructed to be directly responsive to one question, and marginally responsive to the other. This was done to provide a relatively strong test of the hypotheses. In no case was an answer totally irrelevant to the question.

The order with which the debators responded to the questions was counterbalanced, so that for half of the subjects Xavier responded first for each question, and for the other half of the subjects Zillstein responded first. Thus, the design was a 2 (debator responsiveness) X 2 (order) factorial.

Subjects

Subjects were male and female introductory psychology students at Ohio State University, who participated for partial fulfillment of course requirements. One hundred eight subjects participated in two replications, with 68 and 40 subjects, respectively.

Procedure

Subjects were run in groups of 1 to 15. Upon arrival they read written instructions explaining that they were to take part in a study designed to assess the effectiveness of political debates as a method of informing voters of the platforms and policies of political candidates, and of helping voters to chose between candidates. The instructions also included a brief description of the MX missile system and its supposed purpose, and a description of the activities

the subjects would be asked to perform (with the exception of the memory task). When subjects finished reading the written instructions, the experimenter briefly reviewed the description of the proposed MX missile system and some of the reasons for the controversy surrounding it, reiterated the major points of the instructions, and answered any questions.

Subjects were given twelve minutes to read the debate. They were instructed to read the debate only once, and were not allowed to refer to it again after the end of the twelve-minute period. Subjects were then given twenty minutes to complete a questionnaire designed to assess their impressions of the candidates. Finally, they were given 25 minutes to complete measures of memory for the candidates' answers. Subjects were unaware that their memories would be assessed until the measures were distributed. All subjects were fully debriefed and dismissed upon completion of the memory measures.

Dependent Measures

Impressions

Subjects in both replications responded to eight questions concerning each candidate and his answers, and rated the candidates on ten personality trait dimensions. Four questions assessed perceptions of the extent to which each candidate's answers (1) were well-reasoned and logical, (2) were well-organized and clearly stated, (3) reflected knowledge of the facts concerning the MX system, and (4) reflected understanding of the issues involved in the MX controversy. Two questions, designed as manipulation checks, assessed perceptions of the extent to which the answers (1) directly addressed the questions, and (2) were evasive. Two questions assessed (1) liking for each debator, and (2) which candidate they would prefer to vote for. Finally, subjects rated each candidate on five personality trait dimensions related to competence (intelligent, competent, informed, logical, articulate), and five related to honesty (honest, trustworthy, genuine, open, sincere). These ratings provided tests of (1) the hypotheses

regarding attributions of knowledgeability and competence concerning the topics discussed, and attributions concerning general dispositional competence and honesty, (2) the hypothesis that unresponsive content will be perceived as less clear and understandable, and (3) the attraction hypothesis.

Tests of the remaining hypotheses were restricted to replication II. Subjects in replication II responded to six additional questions designed to test the hypotheses regarding perceptions of (1) understanding of the preceding communication, and (2) possible motives for unresponsiveness. Thus, subjects were asked to rate the extent to which each debator appeared to (1) clearly understand the questions asked, (2) be genuinely interested in the questions asked, (3) try to avoid tackling the issues raised by the questions, (4) be primarily concerned with tackling the issues raised as opposed to trying to make himself look good, (5) be concerned with answering as truthfully as possible versus answering in a way likely to please the audience, and (6) try to hide something. All ratings in both replications were on 11 point scales.

Memory

Replication I. Subjects in replication I completed recall measures of memory for the candidates' answers. They were presented with eight pages upon which they were to indicate their recall of each candidates' answers to each of the four questions. Subjects were instructed not to try to reproduce each answer verbatim, but rather to list as many of the points made by the candidate as they could remember.

Two raters independently scored the recall measures. Subjects' answers were compared to a list of points present in the eight answers. A liberal scoring criterion was employed, such that a response was scored as correct if it conveyed the gist of the point in the candidate's answer.

Replication II. Subjects in replication II completed recognition measures of memory for the candidates' answers. For each question, subjects were presented

with a list of twelve points, and instructed to indicate which of the twelve points were present in the target debator's response to the question. For each question, subjects responded twice to the same list of twelve points, once indicating those they recalled as being in Xavier's answer, and once indicating those they recalled as being in Zillstein's answer. Memory measures were presented in the same order as the debate questions and answers.

The twelve points for each question consisted of four categories, containing three points each: (1) points present in Xavier's answer, (2) points present in Zillstein's answer, (3) points responsive to the question from set 1, but present in neither debator's answer, and (4) points responsive to the question from set 2, but present in neither debator's answer.

Results

All analyses of single dependent measures employed a 2X2X2 split plot factorial ANOVA, with the third factor being a within-subjects variable. The first factor (Order) represented which of the two debators responded first throughout the debate. The second factor (Debator) represented which of the two debators gave responsive answers throughout the debate. These two between subjects factors were completely crossed in the design. For each question, all subjects rated both debators, one who was responsive and the other unresponsive. This within subjects factor (Responsiveness) represented which of the two debators was being rated (responsive debator or unresponsive debator). When single measures were combined to form composite variables, a second within-subjects factor (question) was included in the design.

Eighteen of the dependent measures were common to both replications, whereas the rest were assessed for replication II only. The discussion below will indicate which were common to both replications and which were restricted to replication II, either by notation in the Tables or report of degrees of freedom (36 versus 104).

Manipulation Check

Two ratings of the extent to which the candidates' answers (1) directly addressed the questions asked, and (2) were evasive, provided a check on the responsiveness manipulation. As expected, the responsive debator's answers were seen as significantly more directly related to the questions (M's = 2.63 versus 1.3; F (1, 104) = 24.86, p <.001), and as less evasive (M's = -.56 versus .43; F = 8.35, p <.005), than those of the unresponsive debator. Thus, it appears that the manipulation was quite successful.

Processing and Retention

Clarity of Answers

It was suggested that unresponsive content will be more difficult to process and understand than responsive content. Thus, it was expected that unresponsive answers would be perceived as less clear than responsive answers. This prediction was confirmed. Subjects rated the extent to which each debator's answers were (1) well-organized and clearly stated, and (2) well-reasoned and logical. The main effect of responsiveness was highly significant for both ratings: M's = 2.66 versus 1.77, F (1, 104) = 12.07, p <.001; and M's = 2.69 versus 1.81, F (1, 104) = 12.13, p <.001, respectively.

Memory

Results of the recall memory task from replication I (n=68) and the recognition memory task from replication II (n =40) are presented in Table 2. The means,

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Insert Table 2 about here

Fs, and probabilities are for the main effects of responsiveness. It was expected that responsive answers would be recalled better than unresponsive answers. The results of both replications supported this expectation.

Recall. Subjects' recall of candidates' answers were coded for (1) the number of points correctly recalled as being in the target candidate's answer, (2)

the number of intrusions from the other debator's answer, and (3) additions (points recalled that were in neither debator's answer). As shown in Table 2, subjects correctly recalled approximately twice as many points from the responsive debator's answers as from the unresponsive debator's answers. Further, the number of errors in recall was greater for the unresponsive debator's answers. That is, the number of intrusions from the other debator's answers was almost three times as large for the unresponsive debator; and the number of additions tended to be larger for the unresponsive debator (although this difference did not reach significance ($p < .089$)). The only other result that was significant for the recall task was a main effect of debator for number of additions ($F(1,36)=5.46$, $p < .03$). Subjects included more additions for Zillstein (2.40) than for Xavier (1.65).

Recognition. Subjects' recognition responses yielded 6 accuracy scores: (1) points correctly recalled from the target debator's answer, (2) intrusions from partner's answer, (3) relevant intrusions (relevant points from neither debator's answer), (4) irrelevant intrusions (irrelevant points from neither debator's answer, (5) total intrusions (2+3+4), and (6) total correct responses.

The means shown in Table 2 are all in the predicted direction. Again, subjects correctly remembered significantly more points from the responsive debator's answers than from those of the unresponsive debator. However, unlike the recall task, no difference was found for the number of intrusions from the other debator's answers. This lack of difference is probably attributable to the nature of the recognition task. That is, the same three points provided the measure of points correctly recalled for the responsive debator, and the measure of intrusions from partner's answer for the unresponsive debator. If subjects identified the three points as in the responsive debator's answer, they would be unlikely to also identify them as in the unresponsive debator's answer. This comparison process would likely reduce the frequency of partner intrusions.

The other intrusion measures did show some significant effects of responsiveness.

There were significantly more irrelevant intrusions for the unresponsive debator, but no significant differences for the number of relevant intrusions. However, when these two measures are combined (additions) the effect of debator responsiveness is significant. Similarily, when all intrusion measures are combined (total intrusions), there were significantly more intrusions for the unresponsive debator.

Finally, the overall measure of accuracy, which takes into account both correct recall and errors in recall (total correct responses), indicated that overall recognition memory was clearly superior for responsive answers.

Attribution

It was suggested that attributions concerning reasons for unresponsiveness would consist of the absence of attention, understanding, adequate response repertoire, and/or motivation; and associated reasons for their absence, including dispositional characteristics. With the exception of attention (for reasons noted earlier), attributions in each of the above categories were assessed. Results for these measures are presented in tables 3 and 4.

Insert tables 3 and 4 about here

Understanding

Subjects rated the extent to which each candidate appeared to clearly understand the questions. As expected, the responsive candidate was perceived to have more clearly understood the questions ($M = 2.35$) than the unresponsive candidate ($M = 1.85$); see Table 3.

Response Repertoire

Two questions assessed subjects' perceptions of the extent to which each debator's answers reflected (1) knowledge of the facts concerning the proposed MX system, and (2) understanding of the issues involved in the MX controversy. The main effect of responsiveness was significant for the latter of these ratings,

and for their combination, and in the expected direction (though not significant) for the former (see table 3). Thus, it appears, as expected, that the unresponsive debator was perceived to possess a less adequate response repertoire concerning the MX than the responsive debator.

Competence

It was suggested that in the debate situation attributions of failure to understand the questions asked or of inadequate response repertoires will be associated with further attributions of dispositional incompetence. Subjects' ratings of the candidates on five personality dimensions related to competence are presented in table 4. As expected, the responsive candidate was perceived as more competent ($M = 7.06$) than the unresponsive candidate ($M = 6.60$).

Motivation

Two questions assessed the degree to which candidates appeared to be motivated to discuss the issues raised by the questions. Lack of motivation to discuss the topic raised may stem from several sources. First, the speaker may simply not be interested in the topics. Thus, in order to assess attributions of interest, subjects were asked to rate the extent to which the candidates appeared to be "genuinely interested in the specific questions asked." As expected, subjects perceived the unresponsive debator as less interested in the questions than the responsive debator (table 4). There was also a significant debator X responsiveness interaction ($F(1,36)=4.79$, $p < .04$), which may be interpreted as indicating that the effects of responsiveness were larger for ratings of Xavier (2.15 (XR) vs. .15 (XU)) than for ratings of Zillstein (2.15 (ZR) vs. 2.25 (ZU)). The ratings of Zillstein were high in both conditions.

Lack of motivation to discuss the topic raised may also stem from specific desire to avoid the topic. Thus, subjects were asked to rate the extent to which the candidates appeared to try to avoid tackling the issues raised by the questions. Although there was a tendency for subjects to rate the unresponsive debator as

trying harder to avoid tackling the issues, this difference did not reach significance. However, again, there was a significant debator X responsiveness interaction ($F(1,36) = 6.17$, $p < .02$), which may be interpreted as indicating that the expected difference was larger for ratings of Xavier (-.65 (XR) vs. .80 (XU)) than for ratings of Zillstein (-1.40 (ZR) vs. -1.30(ZU)). Again, Zillstein was rated more positively overall.

Self-presentational Goals

It was suggested that in the debate situation lack of motivation to discuss the issues raised would be attributed primarily to self-presentational concerns. Three questions assessed this possibility.

First, subjects were asked to rate the extent to which the candidates appeared to be trying to hide anything. Although the unresponsive candidate was rated as more likely trying to hide something (table 4), this difference did not reach significance ($p < .10$).

Two additional questions assessed perceptions of the relative strength of candidates' motives to tackle the issues or answer truthfully, versus that of their self-presentational goals. That is, subjects rated the extent to which the candidates appeared to be primarily concerned with (1) tackling the issues raised, as opposed to trying to make themselves look good, and (2) answering as truthfully as possible, versus answering in a way likely to please the audience of the debates. As can be seen in table 4, the responsive debator was perceived as relatively more motivated to tackle the issues and answer truthfully whereas the unresponsive debator was perceived as relatively more motivated by self-presentational goals (as indicated by the position of mean ratings relative to the neutral point of the scale (0)). Differences in mean ratings were significant for both questions.

Honesty

To the extent that irrelevant response is perceived as an effort to hide certain information, to avoid certain subjects, or to engage in manipulative

self presentation, it may also lead to attributions of dispositional dishonesty.

Subjects did perceive the unresponsive debator's answers as more evasive, and further, perceived him to be more motivated by self-presentational concerns than by the desire to answer truthfully (as noted above). However, they did not perceive the unresponsive debator to be significantly less dispositionally honest than the responsive debator.

Attraction

It was expected that the responsive debator would be liked better than the unresponsive debator. Attraction was assessed in two ways. First, subjects were asked to indicate how much they liked each candidate. As expected, the responsive debator was significantly more well-liked than the unresponsive debator: M's = 1.99 versus 1.01; F (1, 104) = 7.61, $p < .01$. In addition, a clear three-way interaction was significant for this variable ($F(1, 104) = 5.48$, $p < .05$). The effects of responsiveness for each debator were largest when they answered first, and this effect was most pronounced for Zillstein.

Subjects' preferences to vote for either Xavier or Zillstein provided a second index of attraction. Two analyses of voting preferences were undertaken, and are shown in table 5. First, subjects' responses were analyzed with a two-way

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Insert Table 5 about here

(Debator, Order) factorial ANOVA. There was a significant effect for the debator responsiveness factor only (means and Fs are shown in Table 5). There was a clear preference for the responsive debator despite an overall preference for Zillstein. Second, in order to show more clearly the effects on voting preference, subjects' responses were trichotimized into either preference for one of the candidates or no preference (neutral point on the scale). These frequencies are shown in Table 3. A chi square analysis of this breakdown was significant ($X^2(2) = 14.92$; $p < .001$). Overall, preference for Zillstein was over two times greater than for Xavier. However, as both analyses show, the effect of responsiveness was

strong enough to surface despite this preference.

Discussion

Processing and Retention

Planalp and Tracy (1980) have suggested that the rules governing conversation often have a cognitive basis. That is, such rules function to adapt the speaker's actions to the information processing requirements of the listener. All information in conversation is interpreted with respect to a variety of contextual information (including aspects of preceding conversation, interaction context, common knowledge between participants, etc.). In order to ensure that his utterances are understood easily, and as he intended, the speaker must ensure that the proper contextual information is salient to the listener. We have argued that the listener's own preceding utterance will provide the most immediate and salient context for interpretation of the speaker's current utterance. Thus, it follows that a rule dictating that responses should be relevant, and that topic changes should occur only in conjunction with clear moves to close the preceding topic and locate the context for the new one (see Planalp & Tracy, 1980; Weiner & Goodenough, 1977), would serve to ensure that the appropriate context for interpretation of an utterance is most salient. Use of the appropriate contextual information would then be expected to facilitate processing and retention of the target utterance.

The results of the present investigations indicated clearly that responsive content is processed more easily (as indexed by ratings of the clarity and organization of candidates' responses), and retained better (as shown by both recall and recognition memory measures), than unresponsive content. Similar results were obtained by Planalp and Tracy (1980) in their studies of topic changing. Those topics that were made most clearly relevant to their predecessors were rated as most understandable and communicatively competent. Thus, it appears that contextual information is, indeed, more adequate for relevant than for irrelevant utterances.

Attributions

It was expected that in the debate situation unresponsiveness would affect attributions concerning understanding of the preceding communication, adequacy of the speaker's response repertoire, and motivation to be responsive. The results were clearly as expected. That is, the unresponsive speaker was perceived as (1) having less clearly understood the questions, (2) possessing less knowledge of the facts and understanding of the issues concerning the MX controversy, and (3) being less motivated to discuss the topics raised by the interviewer's questions, as opposed to facilitating their own self-presentational goals. Further, subjects attributed less dispositional competence to the unresponsive speaker. Only attributions concerning honesty were unaffected by responsiveness.

These results clearly illustrate the way in which unresponsiveness can affect attribution processes. However, it must be emphasized that we do not claim that the particular attributions observed in the present situation will always follow from unresponsiveness. As noted earlier, the particular attributions that occur will be strongly affected by many features of the interaction context. The present demonstration simply serves to illustrate the way in which the proposed processes operate in a particular situation, and to suggest that the attributions most likely to follow from unresponsiveness may often be successfully identified.

Before ending the discussion of attribution, we would like to note that attributional consequences of unresponsiveness may differ for observers of an interaction and those involved in the interaction. For example, if the observer dislikes one of those involved or dislikes the topic raised (s)he may react quite favorably to another's unresponsiveness to him (her); attributing great cleverness and perceptiveness to the speaker for so effectively evading the topic or insulting the other. In contrast, we will argue that unresponsiveness will never be experienced positively by the recipient. Thus, although from an observer's point of view there may be instances where unresponsiveness may be superior (for example,

when an obnoxious reporter asks a candidate an obviously inappropriate question); from the recipient's point of view, there will not (e.g., the obnoxious reporter does not enjoy being put down by the unresponsive candidate).

Attraction

As noted earlier, most of the attributions associated with unresponsive interaction will be negative. Thus, attraction to responsive others should be greater than to unresponsive others. The present results clearly supported this expectation. Subjects reported greater liking for the responsive debator, and were more likely to vote for him, than for the unresponsive debator. Similar results have been obtained in situations involving dyadic interactions (Davis & Perkowitz, 1979; Berg & Archer, Note 3), responses of a public speaker to a heckler (Petty & Brock, 1976; Petty, Brock & Brock, 1978), and childrens' judgments of relevant and irrelevant speaker responses to questions (Ackerman, 1981). Together with the results of the present research, those of these studies clearly demonstrate that response relevance will affect attraction in a variety of interaction contexts.

Implications for Political Communication

The results of the present study are particularly relevant for the area of political communication. Despite little systematic investigation, there appears to be a general consensus among political scientists, journalists, and other political observers that political candidates are, more often than not, somewhat less than responsive in answering reporters' questions. The 1980 televised presidential debates between Jimmy Carter and Ronald Reagan typified this phenomena. Observers of these debates probably noticed a considerable lack of directness in candidates' responses to the panel's questions; and in fact the candidates were criticized directly by panel members who complained of their failure to address the questions asked, usually to no avail. In addition, the organization which sponsored these debates, The League of Woman Voters, was criticized in the press for not requiring more responsiveness from the candidates.

More precise documentation of this phenomena is provided by Milac (1979) who analyzed transcripts of the 1976 Ford-Carter debates and portions of the 1960 Kennedy-Nixon debates. Milac was explicitly concerned with the responsiveness of the candidates' answers in these debates. He defined satisfactory answers as either direct (i.e. directly answered the question) or responsive (i.e. the listener could construct an adequate answer from the candidate's response); and unsatisfactory answers as either non-responsive (i.e. candidate's answers served as a vehicle for image building) or evasive (i.e. candidate digressed from the topic). Within this framework, only 56% (36 out of 64) of the candidates' responses in the 1976 debates met the criteria of a satisfactory answer. Similar results obtained when the first and last debates of 1960 were analyzed: only 44% (7 out of 16) of the candidates' answers were considered satisfactory. In these latter debates Kennedy fared much better than Nixon in responding with satisfactory answers (75% vs. 12%), and it is interesting to speculate as to the effect this may have had in contributing to Kennedy's narrow come-from-behind victory.

This tendency of politicians to avoid directly answering questions from the press appears to be neither a new phenomena, as long-time political observers can attest, nor an isolated one. It is, in fact, a strategy which is recommended for dealing with the press. Such a recommendation was made by Greenfield (1980) who observed that politicians are not constrained by demands for a direct answer in many situations due to implicit rules preventing reporters from questioning an evasive answer.

Given that the major goal of political debates is to inform the electorate as to the qualifications and policies of the candidates, it might seem that candidate unresponsiveness would make this information dissemination less than optimal. However, Richard Salent (1979), former president of CBS and observer of the 1976 debates, noted that unresponsiveness itself is informative:

> "If the candidates slipped and slid and hedged and were unresponsive and took refuge in prepared mini-speeches, that in itself should have been significant and enlightening to the viewer and listener because it was one measure of the candidates. The viewer and the listener could then make up his or her own mind on what this meant in deciding for whom - if anybody - he or she would vote" (p. 176).

The results of the present study tend to confirm this observation. Subjects noticed the debator's responsiveness, or lack thereof, and used this information in judging the candidates, their motives, and their answers.

Generalizations from the present study to the real life political arena are to be made with some caution. First, in real life political situations unresponsiveness is often a vehicle for image building or for criticizing one's opponent. Since the unresponsive answers in the present study did not serve these functions, the extent to which image building and opponent derogation may override the negative effects of unresponsiveness was not ascertained. Second, politicians may become so skillful at evading questions that their unresponsiveness may go unnoticed except by the most astute observers. The results of the present study should be taken, then, as indicating, other things being equal, the potential negative consequences of unresponsiveness.

With these provisions in mind, several generalizations can be made from the present study which might be instructive to politicians. First, a candidate's answers are heard not in isolation, but in relation to the question asked. As a result, other things being equal, unresponsive answers will be perceived as less clear and organized than responsive answers, and will be remembered less well. Such effects may at times be of little concern to politicians. However, those who are explicitly concerned with informing the electorate and/or changing attitudes and behavior concerning the issues they address may be advised that unresponsiveness might hinder their efforts.

Second, subjects used the candidates' responsiveness as a basis for making certain inferences about their motives. Overall, the candidate whose answers were

unresponsive was perceived as less interested in attempting to deal effectively and truthfully with the issues and more concerned with pleasing the audience and looking good. Apparently, the political strategy of placing oneself in the best possible light by giving an evasive answer does not fool observers to any great extent. The latter are probably aware that a politician may be manipulating a situation for a self-serving reason; i.e. trying to win votes rather than deal adequately with the issues.

Third, unresponsiveness affects observers' perceptions of, and attraction to, the candidates in a negative way. The candidate whose answers were responsive was judged more competent, and was liked more, than the candidate whose answers were unresponsive. A somewhat surprising finding was that responsiveness did not have a significant effect on judgments of the candidates' honesty. However, the present debate was unique in a variety of respects that would make attributions of dishonesty unlikely.[1] In many situations attributions of dishonesty may predominate.

Finally, the ultimate goal of the debates from the candidate's point of view, i.e., obtaining votes, is affected by responsiveness. In the present study, there was a clear voting preference for the responsive candidate. It appears then, that contrary to popular belief, the time-honored political strategy of evading unwelcome questions and substituting comments on perferred topics may at times result in a negative effect on judgments of the candidates, and their responses, and ultimately on voting preferences.

Conclusions and Directions for Future Research

We noted earlier that the rules that guide the process of interaction also provide the basis for understanding of its meaning. Grice's (1975) earlier work illustrated the way in which rules dictating relevant responses to other's communications can guide the interpretation of the meaning of specific behaviors or utterances (the process of conversational implicature). The present research has expanded this analysis to demonstrate that response relevance will also affect

the ease with which response content is understood and retained, as well as understanding of the larger meaning of the communicative acts, the motives behind them, the character and abilities of the speaker, and the relationship between speaker and listener. Although the present research provides an initial exploration of these processes, a number of issues remain to be addressed.

First, the present research was limited by its constraint to single question-answer sequences. For example, such sequences represent only one variety of sequential utterances in typical conversations. Moreover, in more typical circumstances, the listener may test potential explanations for unresponsiveness in the course of ensuing conversation. Future research should examine more natural conversational sequences, possibly including exploration of strategies employed by listeners to try to understand the content of irrelevant utterances, or to test attributions concerning their causes.

Second, future research should examine contextual features that will moderate the attributional and attraction effects of unresponsiveness. Many aspects of the interaction context, characteristics of the individuals involved, and the nature of the relationship between participants should affect the meaning assigned to unresponsiveness. Exploration of such effects would yield greater understanding both of responsiveness and its consequences, and of human relationships generally.

Finally, the present analysis has been restricted to consideration of the consequences of violation of only one of the many rules guiding the process of interaction. Other such rules have been identified, (e.g., those governing the turn-taking system). Clearly, the dicipline can profit from more systematic exploration of the consequences of their violation.

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Footnote

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1. Several unique features of the present debate situation make it difficult to imagine what the debator could by trying to hide. For example, all questions and answers concerned the MX. Thus, unresponsive answers did not deviate far from the topics at hand. It seems unlikely that dishonesty would motivate such subtle topic shifts. In addition, all answers were anti-MX, and subjects were aware that the Nevada population is overwhelmingly anti-MX. Thus, it is unlikely that subjects would conclude that the speaker shifted topics to avoid revealing something subjects would disapprove of (i.e., pro MX information). Finally, in the usual debate situation observers already have hypotheses about what information the candidates have to hide. However, in the experimental debate subjects had no knowledge of the candidates or their likely sore spots, and certainly no knowledge of their connection to the MX issues. Thus, possible motives for dishonesty are not readily apparent.

Table 1

Debate Question and Answer Sets

SET 1
QUESTION: TO WHAT EXTENT WILL THE IMPLEMENTATION OF THE PROPOSED MX MISSILE SYSTEM HELP PREVENT THE ONSET OF ALL-OUT NUCLEAR WAR?

SET 2
QUESTION: WHAT EFFECT WILL THE PROPOSED MX MISSILE SYSTEM HAVE ON THE POTENTIAL DAMAGE THAT COULD BE INFLICTED ON THE UNITED STATES IN THE EVENT OF AN ALL-OUT NUCLEAR WAR?

XAVIER:

The proposed MX system will not decrease the likelihood of an all-out nuclear war, and may in fact, tend to provoke such an occurence. Nuclear war has been deterred since the 1950's through a mutual balance of terror between the Soviet Union and the United States. That is, both sides have been prevented from starting a nuclear war due to the recognized retaliatory capacity of the other side. Unlike any previous Soviet or American weapon, the MX threatens to upset this balance.

The aim of the MX, twice as accurate as current missiles, gives it the capability to destroy the Soviet land based missile system, or 75% of their nuclear force, in a first attack. Given the vulnerability of the remaining 25% of the Soviet nuclear force, the bombers and submarines, the MX threatens the Soviet nuclear deterent with a devastating first strike potential.

This imbalance could be quite dangerous during an international crisis. The Soviets, threatened by American first strike capabilities, will tend to be forced to choose between loosing or using their weapons first. In so threatening the Soviets, the MX upsets, rather than stabilizes the nuclear balance, by creating a hair-trigger on Soviet nuclear forces.

ZILLSTEIN:

The MX system, as it is presently conceived, will increase the potential damage that would be inflicted on the United States in the event of a nuclear war. That is, the initial MX plans call for twenty shelters to be built for every missile. By building so many shelters in order to provide hide and seek vulnerability for the missiles, the number of potential targets that would draw Soviet fire is greatly increased. The 4,600 shelters called for by the present MX design would draw thousands of megatons of nuclear fire upon it and the surrounding cities and states.

In addition, because of the prevailing high-level westerly winds, fatal fallout from such an attack would drift east from the sites in Nevada and Utah nearly all the way across the country.

Finally, if the government finds it necessary to increase the number of shelters in order to counteract a Soviet build-up of nuclear warheads,

SET 1
QUESTION: WHAT WILL BE THE EFFECTS OF A FAILURE TO RATIFY THE SALT II AGREEMENT ON THE UTILITY OF THE MX MISSILE SYSTEM?

SET 2
QUESTION: IS THE PRESENT UNITED STATES LAND-BASED MISSILE SYSTEM VULNERABLE TO A SOVIET ATTACK?

XAVIER:

The utility of the proposed MX system is almost entirely dependent upon the ratification of the SALT II treaty. The Soviet Union, under the present SALT agreement, is constrained until 1985 to about 7,000 land-based warheads. Under this stricture, the Soviets' first strike capabilities are held in check. That is, the MX system would be invulnerable to attack.

However, if SALT II is not ratified, the Soviet Union would be free to deploy as many warheads as it desires. It is estimated that if the constraints are lifted, the Soviet Union could build enough nuclear warheads by 1989, without increasing their current production rates, to target all 4,600 MX shelters and thus render it vulnerable upon completion.

The United States could attempt to stay ahead of the Soviets by building more shelters. However, the Soviets can build warheads faster, and for about the same cost as these shelters. So without some type of negotiation limiting the number of Soviet warheads, the MX will become vulnerable very quickly.

ZILLSTEIN:

Theoretically, the present land-based missile system is vulnerable to Soviet attack. That is, the Soviets have improved their missile guidance systems such that fully 75% of the land-based missiles in this country would be destroyed by a Soviet first attack.

However, this is only a theoretical, rather than a practical vulnerability. The United States still possesses submarine missiles and bombers equiped with enough warheads to successfully retaliate against the Soviet Union. In order for the Soviet Union to successfully launch a surprise attack, they would have to be capable of simulaneously disposing of the land-based missiles, submarine missiles, and bombers. This task would be impossible to carry out successfully, because of the different time constraints of an attack against each of the three components, the varying degrees of vulnerability that each one has, and the dependency of this vulnerability on the element of surprise.

Not only does the United States currently possess an adequate deterent against a Soviet first-strike, but the Soviet Union can never be sure that the United States has not adopted a launch-on-attack doctrine whereby a counterattack would be launched immediately upon detection of a Soviet attack.

SET 1
QUESTION: HOW MUCH WILL THE PROPOSED MX SYSTEM COST THE AMERICAN TAXPAYER OVER THE NEXT TEN YEARS?

SET 2
QUESTION: HOW MUCH IMPACT WILL THE PROPOSED MX MISSILE SYSTEM HAVE ON THE ECONOMY OF THE UNITED STATES?

XAVIER:

Original Air Force estimates of the cost of the MX system put the ten year cost at 33 billion dollars (in 1980 dollars). However, recent cost estimates by independent firms have placed the total cost at between 50 and 100 billion dollars. A precise cost estimate is somewhat difficult to arrive at due to several contingencies.

First, if a linear drag strip basing, rather than the proposed oval track basing, is used, a decrease in cost of 2 billion dollars will be achieved.

Second, if the system is placed in states other than Nevada and Utah, there will be a 3 billion dollar cost increase.

Third, and most importantly, is the number of shelters that will have to be built. The present proposal calls for the construction of 20 shelters per missile, for a total of 4,600 shelters. If the Soviets respond by building more warheads, then more shelters will have to be built at a cost of approximately 2 billion dollars each. Contingency plans calling for the construction of up to 20,000 additional shelters as needed are currently being formulated by the Air Force, thus increasing the potential cost of the project substantially.

ZILLSTEIN:

The construction of the MX system will greatly contribute to this country's inflationary trends. First, between 50 and 100 billion dollars will be spent on the construction of the MX missile system. This will create a large number of jobs and pump much money into the economy increasing both industrial and consumer demand for goods and services. However, since no goods and services will go on the market as a result of this project, the increased industrial and consumer demand will not be met. Prices will be increased and inflation will be facilitated when increased demand is not met with goods and services.

Second, the large MX expenditures will most likely lead to an unbalanced federal budget. If attempts are made to balance the budget while building the MX, then cutbacks will have to be made on programs and important new initiatives that could potentially help reduce inflation.

Finally, although MX construction will create many jobs, the "job impact coefficient" of the MX system is low compared to alternative projects. There is data provided by the Council on Economic Priorities indicating that the number of jobs created per billion dollars of expenditures on the MX are considerably lower than for alternative projects such as solid waste treatment, day care, or railroad construction, etc.

SET 1
QUESTION: HOW WILL THE CONSTRUCTION OF THE MX MISSILE SYSTEM AFFECT THE RESIDENTS OF THE SMALL COMMUNITIES IN THE TWO HOST STATES, NEVADA AND UTAH?

SET 2
QUESTION: WHAT WILL BE THE ENVIRONMENTAL IMPACT OF THE PROPOSED MX MISSILE SYSTEM?

XAVIER:

The construction of the MX system will tend to promote a boom and bust cycle adversely affecting the quality of life in these two states. The proposed sites for the MX system are the relatively unpopulated areas of Western Nevada and Eastern Utah whose economic bases are largely agricultural. The Air Force estimates that during the peak period of construction and concurrent operation over 100,000 personnel will be needed in this area. This estimate does not include the personnels' family members.

This population influx will greatly increase demands for basic community services such as law enforcement, educational facilities, and health services, etc., thus severely straining the existing community services. In addition, the large influx of people will put a heavy strain on local and regional housing.

Economic and social structures will be altered during the peak construction period in order to handle this influx. Once construction is complete the majority of the personnel will leave the area and thus the rapid boon to the economy will suddenly be halted and a depressed economy will result.

ZILLSTEIN:

The construction of the proposed MX missile system will constitute a serious threat to the environment of the two host states, Nevada and Utah. The MX system, as it is presently conceived, involves the construction of 10,000 miles of highway in an area of only 42,000 square miles. This highway system must be strong enough to handle one million pound vehicles. The entire United States federal highway system built since 1955 is only 40,000 miles. Building a highway one-fourth the size of the federal highway system in such a small area will seriously threaten the environment there.

The concentration of this large a highway system will most certainly take much away from the natural scenic beauty of the two host states with many natural habitats being replaced by structures and roads. Various vegetation and soil changes will occur during construction. Invading weedy species may grow once the land surface is disturbed; and soil composition and water holding capacity will be altered.

Finally, MX construction in the dry arid climates of Nevada and Utah will seriously affect the air quality in that area through the release of dust particles.

Table 2

Memory for Debators' Answers

	Responsive	Unresponsive	F	P
Experiment I[a]				
points correctly recalled	6.04	3.07	43.15	.00001
intrusions from partner's answer	.82	2.59	62.17	.00001
additions	1.78	2.26	2.98	.089
Experiment II[b]				
points correctly recalled	7.67	6.72	7.72	.009
intrusions from partner's answer	3.55	3.60	.02	ns
relevant intrusions	2.60	2.95	1.23	ns
irrelevant intrusions	1.97	3.07	10.56	.003
additions[c]	4.57	6.02	9.93	.004
total intrusions[d]	8.13	9.63	9.52	.004
total correct responses	35.55	33.10	20.13	.001

a degrees of freedom = 1, 64
b degrees of freedom = 1, 36
c irrelevant + relevant intrusions
d irrelevant + relevant + intrusions from partner

Table 3

Effects of Responsiveness on
Attributions of Understanding, Response
Repertoire and Motivation

	Responsive	Unresponsive	F	P
Understanding				
candidate appear to understand questions (II)	2.35	1.85	11.94[a]	.002
Response Repertoire				
answers reflect knowledge of facts about MX (I, II)	2.64	2.33	1.58[b]	ns
answers reflect understanding of issues concerning MX (I, II)	2.62	1.98	7.72[b]	.01
mean	2.63	2.14	5.51[b]	.025
Motivation				
candidate interested in questions asked (II)	2.15	1.20	3.92[a]	.06
candidate trying to avoid tackling issues raised by questions (II)	-1.02	-.25	1.82[a]	ns

a degrees of freedom = 1, 36
b degrees of freedom = 1, 104

Table 4

Effects of Responsiveness or Attributions of Dispositional Honesty and Competence and of Self-presentational Motives

	Responsive	Unresponsive	F	P
Honesty (I, II)	6.19	5.88	1.89[a]	ns
Competence (I, II)	7.06	6.60	6.58[a]	.025
Self-Presentational Motives (II)				
trying to hide something	-1.20	-.32	2.90[b]	.10
interest in tackling issues versus looking good	1.07	-.60	10.93[b]	.003
interest in answering truthfully versus pleasing audience	.67	-.52	4.19[b]	.05

a degrees of freedom = 1, 104
b degrees of freedom = 1, 36
c based on mean rating for traits honest, trustworthy, genuine, sincere, open
d based on mean rating for traits intelligent, competent, informed, logical, articulate

Table 5

Voting Preferences

	Xavier Responsive	Zillstein Responsive	F[b]	P
Voting preference[a]	.15	2.5	19.91	.001

Voting Frequences	Xavier Responsive	Zillstein Responsive	Total
Vote Xavier	24	6	30
No preference	2	3	5
Vote Zillstein	28	45	73
Total	54	54	108

a rated on an 11 point scale from -5 (Xavier) to +5 (Zillstein)
b df = 1, 104